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KOLPO-CYSTOTOMY

BY

ELECTRO-CAUTERY.

WITH REMARKS ON

OTHER METHODS OF OPERATING.

BY

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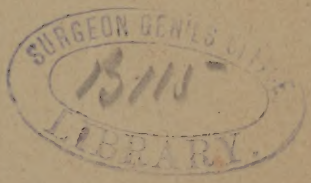

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KOLPO-CYSTOTOMY BY GALVANO-CAUTERY.

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CYSTOTOMY, as a means of securing continuous artificial drainage in inflammation of the bladder, is emphatically an American operation, yet, as with many other and equally brilliant surgical achievements of like origin, somewhat tardy of recognition, and but seldom resorted to in other countries.

Nearly thirty years ago, as is well known, Professor Willard Parker, of New York, first proposed and adopted this ingenious means of relief for cystitis in the male, the object being, as he states, "*to open a channel by which the urine could drain off as fast as secreted, and thus afford rest to the bladder, the first essential indication in the treatment of inflammation.*"[1]

A few years subsequently Dr. Sims, recognizing the evil consequences occasionally following the too early closure of vesico-vaginal fistulæ, more particularly openings made for the extraction of vesical calculi, because of the frequent coexistence of cystitis, counseled delay in closing such apertures, until by rest, drainage, and judicious therapeutical measures the inflamed bladder might be restored to a comparatively healthy condition.[2]

Though there is no record of Dr. Sims having practised kolpo-cystotomy for inflammation of the bladder in the female previous to 1861, there can hardly be a doubt but that this new departure in the management of one of the most painful and intractable ailments of women was fully

[1] *New York Medical Journal*, vol. vi., 1851.

[2] *Principles of Gynecology*, by T. A. Emmet, New York, 1879, p. 728.

considered, matured, and decided upon, not alone by him, but also by Dr. Emmet and probably others. Be this as it may, it would appear that Dr. Bozeman's operation in January, 1861,[1] though not published until ten years thereafter, and quite likely unheard of beyond the immediate neighborhood of the patient's home in Mississippi; and that of Dr. Emmet in the same year, but, doubtless, independently of the former; and the inevitable outcome of what was observed by Dr. Sims three years previously, must be considered as the first efforts in this direction of which we have any authentic record.

Since then, but more especially during the last decade, the operation has steadily gained favor with the profession, and, so far as I know, gynecologists generally, in this country at least, fully indorse and resort to it in all suitable cases. The latest and an exceedingly valuable contribution to our clinical reports of this operation is by Professor Pallen, of New York,[2] who has twice successfully operated by galvano-cautery, and twice by the benzine device of Paquelin, which latter he seems to prefer to all other means. In this connection, and in justice to myself, I trust it may be pardonable for me to remark that for several years past, namely, from October, 1875, till the present time, though my cases of cystotomy have not as yet been published, the galvanic cautery has been employed in every instance except three, and in these I operated as formerly by scissors, the necessary apparatus not being accessible at the time. Moreover, this method of opening into the bladder for the removal of vesical calculi as well as for the relief of cystitis, was repeatedly suggested to my colleagues at St. Mary's Hospital long before I was afforded an opportunity to put it into practice. My absence from the meeting[3] of the New York Obstetrical Society, at which Dr. Pallen's paper was read, and a desire, subsequently, to avoid even the semblance of arrogating to myself claims to which a contem-

[1] *American Journal of Obstetrics*, vol. iii., p. 636.

[2] *American Journal of Obstetrics*, April, 1878, vol. xi., p. 269.

[3] December 18, 1877.

porary, yet independent, observer should be accorded a rightful share, will, I trust, satisfactorily account for my tardiness in offering the foregoing statement.

Any further reference to the history of kolpo-cystotomy, or the discussion of questions touching individual claims as to priority in its conception or execution, would but consume time and serve no useful purpose. I shall, therefore, proceed to notice certain instruments devised to facilitate and simplify the operation, to describe my manner of operating, and briefly to state the reason why I consider it the most expeditious, safe, and efficient method of securing continuous vesico-vaginal drainage.

My earliest operations for cystotomy by cautery were conducted with the aid of a simple contrivance, improvised

FIG. 1.

for an emergency. It is a brass tube about seven millimeters in diameter, and bent near one extremity somewhat after the manner of an ordinary steel sound, the opening at the point being plugged with hard rubber and the opposite end fixed in a handle. On the convexity of the bend is a long oval opening which, when in the bladder, can be very easily felt through the septum. Into this depression the the cautery knife, *while cold*, was inserted, and, when brought to a proper heat, maintained in this position until the blade had passed through the septum, and the two instruments were felt to be in contact. The knife was then moved up and down along the groove until an opening of sufficient length was effected and the operation thus completed. This kind of director answered my purpose pretty well, and the operations in which it was used were, on the whole, satisfactory; nevertheless, considerable difficulty was experienced by my assistants in keeping it perfectly steady, for the slightest deviation from the position first selected for incision was apt to confuse and otherwise give trouble; hence arose the necessity for something still bet-

ter, and as a consequence, what may be styled a *vesico-vaginal guide-forceps* was contrived.

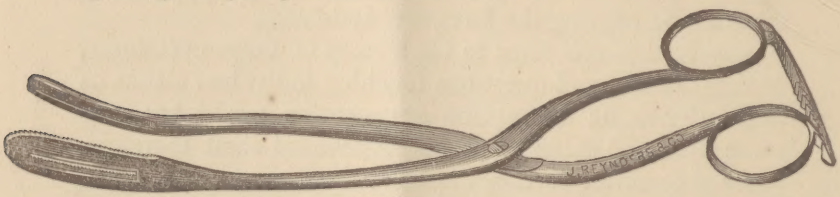

FIG. 2.

This instrument consists of a round vesical staff or arm, provided with a deep groove on its inner surface near the extremity, and a flat vaginal blade having a fenestrum exactly corresponding with the groove, both parts being hinged after the manner of an ordinary polypus or dressing forceps. The vaginal blade is faced with ivory and deeply serrated, and a ratchet-spring secures the forceps when closed. Its practical utility will be more fully appreciated by a description of my present method of operating.

The patient having been placed on the left side and the parts well brought into view by means of a Sims' retractor, the round vesical staff of the guide-forceps is to be passed through the urethra into the bladder, and, simultaneously, the fenestrated blade carried along the vaginal wall in a direct line with the urethra, up to within a short distance, say a quarter of an inch, of the cervix. The instrument, being now closed and securely locked by the ratchet-spring, may be assigned to an assistant or supported and steadied by the left hand of the operator. In this manner the normal relative position of the vaginal, vesical, and intermediate tissues is maintained, and the risk of an indirect or valvate incision avoided, while the open slit in the lower blade furnishes an accurate and unvarying guide for the cautery knife.

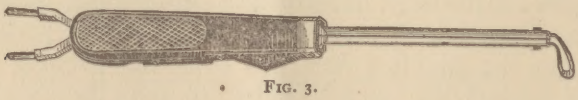

FIG. 3.

This latter, the blade of which, it will be observed, is

bent at nearly a right angle with the handle, is now to be placed in the slit, the battery circuit closed, and the tissues cut through by a few up and down strokes, until the little platinum blade is found to be in direct contact with the bottom of the groove in the vesical staff for its entire length, which, in the instrument here shown, is a little over an inch. The operation is now to be completed by passing the heated knife a few times over the edges of the wound so as to effect a more thorough cauterization. On releasing and withdrawing the forceps the wound will now be found to represent a long, narrow, open fenestrum, as if a corresponding piece of the septum had been punched out, while the mucous membrane immediately surrounding the aperture and elsewhere will show no trace of injury from accidental or excessive cauterization, and, I need hardly say, none from heat radiation. At the expiration of from four to six weeks the opening will generally be found to have shortened about one half, yet leaving ample space for the outflow of urine, and, as a rule, no further contraction follows. In one case, however, I have seen almost complete closure at the end of three months, there being no more than a pin-hole, and even this became obliterated within another month, but as the cystitis was cured there was no occasion for a second operation. In another case, coming under my observation within the last six months, the fistula had so nearly closed in the space of a few weeks, that, although the patient expressed herself as feeling entirely relieved, and could retain urine for four hours without the least inconvenience, the operation was repeated. Still, with regard to these two exceptional cases, it is proper to remark that the grooved staff was employed as a director, the more perfect instrument not having been then contrived, so that even these trifling drawbacks may be overcome in the future by the improved means now adopted.

As to the after-management of these cases, I have nothing to suggest beyond what would naturally occur to any intelligent practitioner. The bladder should be thoroughly washed out, two or more times a day, with warm carbolized

water (temp. 104° ad 110° F., strength one per cent.), and the fistula carefully examined at least once a month, so as to remove sabulous incrustations; and, in order to make sure that the opening is pervious, a large sound or gum-elastic catheter should be passed through the urethra into the vagina. I have never seen permanent, and seldom even temporary, relief follow the use of acid, alkaline, anodyne, or other vesical injections in the treatment of well-marked chronic cystitis, while after cystotomy they are not only uncalled for and worthless, but may even do more harm than good.

Of the other methods of performing kolpo-cystotomy, as contrasted with mine, a very few words will suffice to express my views and opinions.

I have operated repeatedly with scissors as practiced by Dr. Emmet, and, on the whole, with very satisfactory results, but though the proceeding is a simple one, and with due care and a little dexterity may be easily accomplished, yet the most careful watching and every effort will sometimes fail to prevent the wound from closing. The perforated glass stud and other ingenious devices, though occasionally useful, will often, as is well known, become so great a source of local disturbance as to demand their removal. Even cauterization of the edges of the wound after incision by scissors, though a useful and commendable proceeding, cannot be so effectual as the more thorough, yet infinitely less troublesome, plan, by which the entire object of the operation may be accomplished at once.

With regard to Dr. Bozeman's method, I have had no experience whatever. The excision of a large circular piece "the size of a silver dollar," would, to a certainty, most effectually accomplish the desired end, so far as drainage is concerned, but I have very grave doubts as to the wisdom or propriety of any measure so radically heroic.

As to the so-called thermo-cautery, though I have witnessed its action in the hands of others, and am somewhat familiar with the apparatus and the various instruments employed, I have never used it myself for any surgical purpose.

The very nature of the thermo-genic agent employed, which of itself is dangerous, unless very cautiously handled, the comparatively bulky form of the hollow platinum tips, admitting of little or no modification as to size, shape, or range of adaptation, the heavy steel tube to which they are rigidly united, and by reason of which, not alone the cauterizing point or surface, but the entire metallic portion of the shaft, becomes rapidly and intensely hot, all combine to render this apparatus of doubtful *general* utility, and, in my judgment, unsuited for delicate operations in cavities or other close quarters.

Dr. H. P. C. Wilson, who is a strong advocate for "thermo-cautery," has fully realized the difficulties attending these defects, and has already devised a kind of anti-calorific jacket for the instrument. It seems to me, however, that any contrivance of this sort must greatly interfere with manipulation, by rendering it too clumsy, unwieldy, and complicated, and, in an operation like cystotomy, seriously obstructive to space and light.

In noticing these peculiar features of the benzine cautery I am not unmindful of the fact that in amputation of the cervix, and perhaps a few other operations, many surgeons have expressed their entire satisfaction with its manner of action. Expert operators would doubtless be able to contend against many defects and obstacles which the less experienced might find insurmountable, yet in operating with such an instrument within the vagina nothing short of extreme care, and an amount of skillful and adroit manipulation which but few possess, can prevent unnecessary destruction of tissue, and perhaps serious injury to neighboring parts.

For the foregoing reasons, therefore, I think it quite probable that "*the thermo-cautery*" will, ultimately, share the fate of many other chirurgical novelties, and when further experience shall have demonstrated its proper and legitimate sphere of usefulness, veterinary surgery, and not gynæcology, will enjoy a monopoly of its claims and merits.

It cannot be denied that, ten years ago, any such ingenious contrivance might have been a most acceptable substitute for the very best galvanic apparatus of that period, for however open to grave objections, it would at least have afforded a temporary respite from perplexing annoyances and disappointments. It is hardly necessary, however, to remind those whose views differ from mine, or who, perhaps unconsciously, base their preference for "thermo-cautery" on personal convenience merely, that galvano-cautery was then in its infancy; that our scientific knowledge of electro-thermal laws was but crude and imperfect; and that our earlier methods of dealing with this wonderful power were but awkward and unskillful. An operation at the residence of a patient rendered the services of an expressman indispensable for the transportation of a huge pile of carbon and zinc, and several gallons of exciting fluid, or a cumbrous Middeldorpff battery, with strongest nitric and sulphuric acids; even thus fortified, disaster was the rule, and success exceptional.

Now, however, and for several years past, with a simple, portable, and efficient, yet comparatively inexpensive, little apparatus for generating heat by galvanic action, and by which disappointment can only follow inexcusable carelessness, or a defiance of plain physical laws with which every intelligent man is, or ought to be, conversant; with improved electrodes, and platinum devices from the smallest point to the heaviest instrument called for, and most of which any one can modify and fashion to suit circumstances; and finally with a power absolutely under the control of the operator; it is hard to understand why anything more complete and perfect in this line should be desired, and one cannot but feel amazed to hear such a means characterized as "*troublesome*," "*expensive*," "*filthy*," and "*unreliable*." [1]

[1] "The Treatment of Epithelioma of the Cervix Uteri," by J. Marion Sims, M. D., *American Journal of Obstetrics*, vol. xii., p. 453.